UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
POLTORAK, PIOTR

ART UNIT	PAPER NUMBER
2134	

DATE MAILED: 01/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>20 October 2004</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *19-26,29-41,47-54,60-64,67-81 and 87* is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *19-26,29-41,47-54,60-64,67-81 and 87* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a)☐ All   b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____.

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
     Paper No(s)/Mail Date *9/23/02, 2/13&2/13/04*

4) ☐ Interview Summary (PTO-413)
     Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

DETAILED ACTION

1. Claims 19-26,29-41,47-54,60-64,67-81 and 87 have been examined.

Specification

2. The specification *(pg. 10 last §)* describes a computing device 150 as shown in Fig.

3.   The description discloses that the computing device150 can be, for example, a

device 120-124 of Fig. 2.

The language as cited suggests that computing device can be a system comprising

devices 120-124. The examiner believes that the specification aim to mean

"computing device 150 can be, for example, one of a device 120-134" and suggests

to explicitly point out the invention in the specification language.

3. For consistency, similar change should be implemented to the specification text

presented on pg. 35 lines 8-9.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. The claimed invention is directed to non-statutory subject matter. Claims 19-40 are

referring solely to abstract manipulation of data.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in

the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 40 and 68 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The specification provides no guidance in teaching in regard to indicating that the received plaintext directory entry cannot be encrypted if the length of the encoded identifier exceeds a fixed encrypted directory entry size by more than one.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 19-26,29-41,47-54,60-64,67-81 and 87 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that applicant regards as the invention.

7. In claims 19, 48 and 67 "the encoded identifier" lacks antecedent basis. Furthermore, claim 19, 48 and 67 discusses "an identifier" which is mapped generating "a mapped identifier" which then is encoded. The last limitation recites: "encrypting the encoded identifier". It is not clear to what object whether this last limitation refers to the encoded mapped identifier or the identifier. For the further examination purposes the examiner will treat "encrypting the encoded identifier" as "encrypting the mapped identifier".

8. The limitation (claims 29, 50 and 72): "if the identifier is equal to one of the plurality of illegal identifiers followed by one ore more particular characters, then using as the mapped identifier the identifier with one of the particular characters removed" is not clear. For example illegal identifier (e.g. "copy") followed by a particular character (e.g. "_", *claim 30*) could produce an identifier ("copy_"), wherein removing the particular character would result in illegal identifier. Thus, the limitation allows for illegal identifiers to be used as the mapped identifier. As a result the significance of the other limitations is not understood.

Furthermore the limitation "if the identifier is not equal to one of the plurality of illegal identifiers followed by one or more particular characters, then using the identifier as the mapped identifier" is not clear. In particular, the significance of *"followed by one or more particular characters"* is not understood. It is not clear the applicant attempts to further limit the set of "accepted legal identifiers" *(set the minimum length of the identifier)*, or whether there is some other meaning to this limitation.

Claims 29 and 50 and 72 include the statements: "*if* the identifier <u>is not equal to one of the plurality of illegal identifiers</u>, *then checking whether* <u>the identifier is equal to one of the plurality of illegal identifiers</u> followed by one or more particular characters" is not very clear. The statement suggests that the identifier can be both: equal and not equal to one of the plurality of illegal identifiers where the intended meaning seems to be checking whether the identifier includes an illegal identifier if the identifier is not equal to one of the plurality of illegal identifiers.

9. The specification and claims 21-22, 49 and 69 refer to "decasifing". The term is not understood even though the attempt is made to clarify the term in the specification. For example pg. 12 lines 15-16 recites following: "decasifies the mapped name into a decasified name (e.g., a name where the case of the characters has no importance)" suggesting that decasifing refer to changing character cases as shown in example on pg. 18 second § ("Memo.doc" is changed to "MEMO.DOC"). In other words the term "decasifing" would be an intuitively understood to one of ordinary skill in the art as changing a character case to be uniform to the case of other characters. However, pg. 16 last §-17 first § suggests that non letter characters can be the subject of "decasifing".

For purpose of further examination the examiner considers "decasifing" as changing case of a character to the corresponding character with the same meaning, e.g. "a" to "A" or "A" to "a".

10. In claims 31, 36, 51, 53, 72 and 74 "the order of characters", "the reversed identifier", "the next character" and "the encoded next character" lack antecedent basis.

11. Claims 47, 60 and 87 referring to the encrypting process allowing verifying an entry without decrypting the encrypted entry is not understood. It is not clear whether the language as stated refers to the <u>authentication</u> of an entry or simply to the fact that two <u>encrypted entries</u> <u>can be compared</u>. For purpose of further examination the examiner considers that the limitation refers to the process wherein it is <u>possible</u> to compare two entries without decrypting one of them.

12. Claims 20, 23-26, 30, 32-41, 51-54, 61-64, 68, 70-71, 73 and 75-81 are rejected by

virtue of their dependence.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

13. Claims 19-30, 37-39, 41-48, 50, 54, 60-64, 67, 70-73, 80-81 and 87 are rejected

under 35 U.S.C. 103(a) as being unpatentable over *ISU*

(http://www.isu.edu/departments/comcom/unix/workshop/) in view of *Olkin et al.*

(U.S. Pub. 20030046533) and in further view of *Official Notice.*

14. As per claims 19-20 and 25-26 *ISU* teaches creating files and directories using

characters *(Section 4: The Unix Shell, Special characters in Unix segment).* Since

file or directory is created by intercepting characters typed by a user, the *ISU*

teaching reads on receiving an identifier. Furthermore *ISU* teaches limited set of

characters *(command names, Section 4: The Unix Shell, CONCEPT segment)* and

special characters *(Section 4: The Unix Shell, Special characters in Unix segment).*

ISU does not explicitly teach generating, based on the identifier, a mapped identifier;

however it would have been obvious to one of ordinary skill in the art at the time of

applicant's invention to generate a mapped identifier *(validate file/directory name)*

since *ISU* explicitly warns about use of the special characters and their meaning to

the operating system *(Section 4: The Unix Shell, Special characters in Unix*

segment). The purpose of mapping is to prevent identifier causing unexpected

results. Thus encoding *(storing the file name in the computer code)* only if the

received identifier was syntactically legal *(being other than command name or*

special character) is implicit.

ISU does not teach encrypting the encoded identifier. *Olkin et al.* teaches encrypting

the encoded identifier *(Olkin et al. [74]).* It would have been obvious to one of

ordinary skill in the art at the time of applicant's invention to encrypt the encoded

identifier as taught by *Olkin et al.* One of ordinary skill in the art would have been

motivated to perform such a modification in order to provide security *(Olkin et al.*

[83]).

15. As per claims 37-39, 54 and 80-81 *ISU* in view of *Olkin et al.* do not explicitly teach

ciper block chaining to encrypt the encoded identifier. However, the choice of DES-

CBC for example as an encryption would have been obvious to one of ordinary skill

in the art given that they are well known and barring any unexpected results. It

would have been obvious to one of ordinary skill in the art at the time of applicant's

invention to encrypt the encoded identifier using a cipher block chaining. One of

ordinary skill in the art would have been motivated to perform such a modification in

order to utilize well-known and proven encryption process.

16. As per claim 41 Unix runs on computers.

17. As per claim 29, 50 and 72 *ISU* teaches that shell accepts and executes commands

which reads on checking whether the identifier is equal to one of a plurality of illegal

identifiers. *ISU* further teaches that the command consists of command name

followed by blank space and arguments *(command names, Section 4: The Unix

Shell, CONCEPT segment)*. Using the identifier if it is not equal to one of the

plurality of illegal identifiers followed by one or more particular characters is implicit.

If the identifier is not equal to one of the plurality of illegal identifiers, then checking

whether the identifier is equal to one of the plurality of illegal identifiers followed by

one or more particular characters is inherent.

18. Claims 30 and 73 *ISU* in view of *Olkin et al.* teach generating the mapped identifier

as discussed above. *ISU* in view of *Olkin et al.* do not teach the particular character

being removed comprising an underscore. Official Notice is taken that it is old and

well-known practice to remove characters which are not letters in order to save

space. It would have been obvious to one of ordinary skill in the art at the time of

applicant's invention to remove the particular character comprising an underscore.

One of ordinary skill in the art would have been motivated to perform such a

modification in order to save space.

19. Claims 47-48, 60, 62-64, 67, 68-71 and 87 are substantially equivalent to claims 20-

21 and 25-26; therefore claims 47-49, 60, 62-64, 67, 69-70 and 87 are similarly

rejected. When two identifiers are encrypted it is not necessary to decrypt them in

order to check whether they are identical.

20. As per claim 60 *ISU* do not explicitly teach communicating the encrypted directory

    entry to another device. Official Notice is taken that it is old and well-known practice

    to communicate the encrypted data to another device in order benefit from secure

    data exchange.

21. As per claim 61 *ISU* in view of *Olkin et al.* teach the computer readable media as

    discussed above. *ISU* and *Olkin et al.* do not explicitly teach a computer is part of a

    serveless distributed file system. Official Notice is taken that it is old and well-known

    practice to include a computer in a serveless distributed file system to benefit of file

    sharing.

22. Claims 21-24, 49 and 69 are rejected under 35 U.S.C. 103(a) as being unpatentable

    over *ISU (http://www.isu.edu/departments/comcom/unix/workshop/)* in view of *Olkin*

    et al. (U.S. Pub. 20030046533) and in further view of *Lamkin et al. (U.S. Pub.*

    20020088011) and *Official Notice.*

23. *ISU* in view of *Olkin et al.* teach generating the mapped identifier. Furthermore, *ISU*

    in view of *Olkin et al.* teach that UNIX unlike DOS is case-sensitive *(Section 4: The*

    Unix Shell, EXPLANATION segment). *ISU* in view of *Olkin et al.* do not teach

    generating, based on the mapped identifier, a decasified identifier and

    corresponding case information. *Lamkin et al.* teach that files and directories must

    be developed with case sensitivity in mind and recommend approach to use only

    capital letters for all directories and file names *(Lamkin [87])* and provides an

    example of decasifing characters *(forcing all characters to uppercase, Lamkin [83]).*

    It would have been obvious to one of ordinary skill in the art at the time of applicant's

invention to decasify identifiers as taught by *Lamkin*. One of ordinary skill in the art

would have been motivated to perform such a modification in order to allow identifier

to be accessible and usable by a plurality of client device platforms *(Lamkin,*

Summary of the Invention and [83]). Generating corresponding case information is

implicit; the information about the original identifier must be kept for the case-

sensitive systems. It is also implicit to limit decasifing to only particular set of

characters. Some of the characters (e.g.) letters have their equivalent meaning

when case is changed, and some others e.g. numbers.

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Peter Poltorak whose telephone number is

(571)272-3840. The examiner can normally be reached Monday through Thursday

from 9:00 a.m. to 4:00 p.m. and alternate Fridays from 9:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Gregory Morse can be reached on (571) 272-3838. The fax phone

number for the organization where this application or proceeding is assigned is 703-

872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For

more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Signature

12/23/04

Date

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER